



5763

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VHF BEAM POWER AMPLIFIER

9-PIN MINIATURE TYPE

GENERAL DATA**Electrical:**

Heater, for Unipotential Cathode:

Voltage. 6.0 ac or dc volts

Current. 0.75 amp

Transconductance for plate

current of 45 ma. 7000 μ hos

Mu-Factor, Grid No.2

to Grid No.1 16

Direct Interelectrode Capacitances:⁰Grid No.1 to Plate. 0.3 max. μ fInput 9.5 μ fOutput. 4.5 μ f⁰ With no external shield.**Mechanical:**

Mounting Position. Any

Maximum Overall Length 2-5/8"

Maximum Seated Length. 2-3/8"

Length, Base Seat to Bulb Top (excluding tip). 2" \pm 3/32"

Maximum Diameter 7/8"

Bulb T-6-1/2

Base Small-Button Noval 9-Pin

Basing Designation for BOTTOM VIEW 9K

Pin 1-Plate

Pin 2-No

Connection

Pin 3-Grid No.3

Pin 4-Heater



Pin 5-Heater

Pin 6-Grid No.2

Pin 7-Cathode

Pin 8-Grid No.1

Pin 9-Grid No.1

RF POWER AMPLIFIER & OSCILLATOR-Class C Telephony⁰⁰

and

RF POWER AMPLIFIER-Class C FM Telephony**Maximum CCS[•] Ratings, Absolute Values:**

DC PLATE VOLTAGE 300 max. volts

DC GRID-No.3 (SUPPRESSOR) VOLTAGE. 0 max. volts

DC GRID-No.2 (SCREEN) VOLTAGE. 250 max. volts

DC GRID-No.1 (CONTROL-GRID) VOLTAGE. -125 max. volts

DC PLATE CURRENT 50 max. ma

DC GRID-No.2 CURRENT 15 max. ma

DC GRID-No.1 CURRENT 5 max. ma

PLATE INPUT. 15 max. watts

GRID-No.2 INPUT. 2 max. watts

PLATE DISSIPATION. 12 max. watts

• ⁰⁰: See next page.

MAY 20, 1949

TUBE DEPARTMENT

TENTATIVE DATA 1

RADIO CORPORATION OF AMERICA, HARRISON, NEW JERSEY



VHF BEAM POWER AMPLIFIER

PEAK HEATER-CATHODE VOLTAGE:

Heater negative with respect to cathode. 100 max. volts

Heater positive with respect to cathode. 100 max. volts

BULB TEMPERATURE AT HOTTEST POINT

ON BULB SURFACE 250 max. °C

Typical Operation at 50 Mc:

DC Plate Voltage	300	volts
Grid No.3.	Connected to cathode at	socket
DC Grid-No.2 Voltage	250	volts
DC Grid-No.1 Voltage*	{ -60 22000	volts ohms
Peak RF Grid-No.1 Voltage.	80	volts
DC Plate Current	50	ma
DC Grid-No.2 Current	5	ma
DC Grid-No.1 Current (Approx.)	3	ma
Driving Power (Approx.)	0.35	watt
Power Output (Approx.) ^o	8	watts

FREQUENCY MULTIPLIER

Maximum CCS* Ratings, Absolute Values:

DC PLATE VOLTAGE	300 max.	volts
DC GRID-No.3 (SUPPRESSOR) VOLTAGE.	0 max.	volts
DC GRID-No.2 (SCREEN) VOLTAGE.	250 max.	volts
DC GRID-No.1 (CONTROL-GRID) VOLTAGE.	-125 max.	volts
DC PLATE CURRENT	50 max.	ma
DC GRID-No.2 CURRENT	15 max.	ma
DC GRID-No.1 CURRENT	5 max.	ma
PLATE INPUT.	15 max.	watts
GRID-No.2 INPUT.	2 max.	watts
PLATE DISSIPATION.	12 max.	watts

PEAK HEATER-CATHODE VOLTAGE:

Heater negative with respect to cathode. 100 max. volts

Heater positive with respect to cathode. 100 max. volts

BULB TEMPERATURE AT HOTTEST POINT

ON BULB SURFACE 250 max. °C

Typical Operation:

	Doubler to 175 Mc	Tripler to 175 Mc	
DC Plate Voltage	300	300	volts
Grid No.3.	Connected to cathode at		socket
DC Grid-No.2 Voltage	*	*	volts

□ Key down conditions per tube without amplitude modulation. Modulation essentially negative may be used if the positive peak of the audio-frequency envelope does not exceed 115% of the carrier conditions.

^o Useful power output is approximately 7 watts.

•, •, •: See next page.

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TENTATIVE DATA 1

RADIO CORPORATION OF AMERICA, HARRISON, NEW JERSEY



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VHF BEAM POWER AMPLIFIER

	<u>Doubler</u> <u>to 175 Mc</u>	<u>Tripler</u> <u>to 175 Mc</u>	
DC Grid-No.1 Voltage [®]	{ -75 75000	-100 100000	volts ohms
Peak RF Grid-No.1 Voltage.	95	120	volts
DC Plate Current	40	35	ma
DC Grid-No.2 Current	4	5	ma
DC Grid-No.1 Current (Approx.) . .	1	1	ma
Driving Power (Approx.).	0.6	0.6	watt
Power Output (Approx.)*.	3.6	2.8	watts

Maximum Circuit Values (for maximum rated conditions):

Grid-No.1-Circuit Resistance 0.1 max. megohm

CHARACTERISTICS RANGE VALUES FOR EQUIPMENT DESIGN

	<u>Note</u>	<u>Min.</u>	<u>Max.</u>	
Heater Current	1	0.69	0.81	amp
Grid No.1-Plate Capacitance♦	-	-	0.3	μμf
Input Capacitance♦	-	8.0	11.0	μμf
Output Capacitance♦	-	3.8	5.2	μμf

♦ with no external shield.

Note 1: With 6 volts ac on heater.

• Continuous Commercial Service.

® Obtained from a fixed supply, or by a grid-No.1 resistor of value shown.

Useful power output is approximately 2.1 watts for doubler service and 1.3 watts for tripler service.

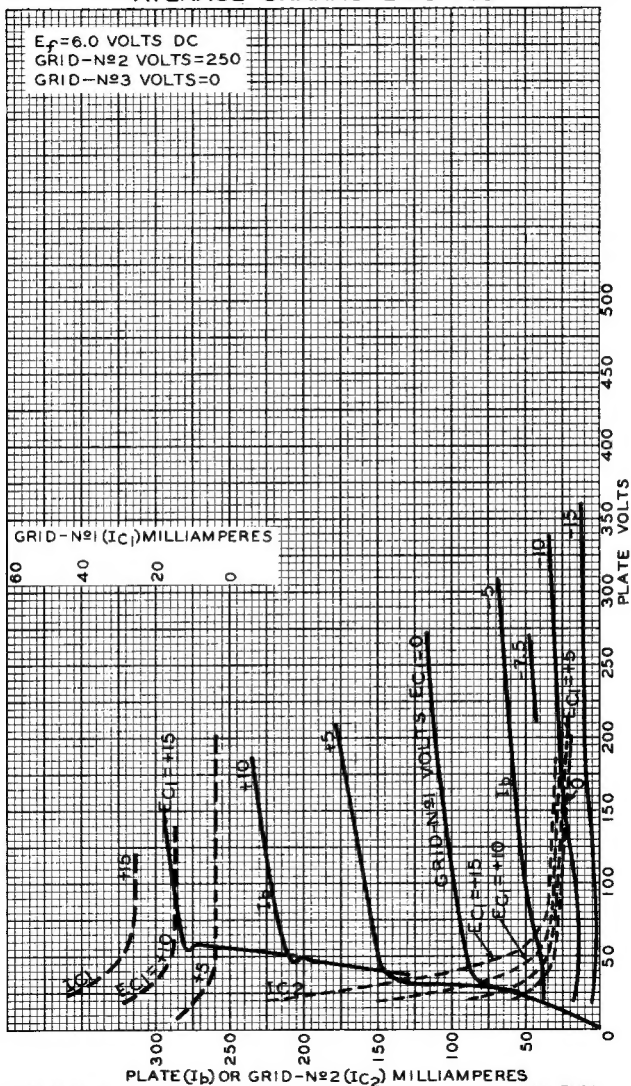
* Obtained from plate supply voltage of 300 volts through a series resistor of 12500 ohms.

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AVERAGE CHARACTERISTICS



JAN. 12, 1949

TUBE DEPARTMENT

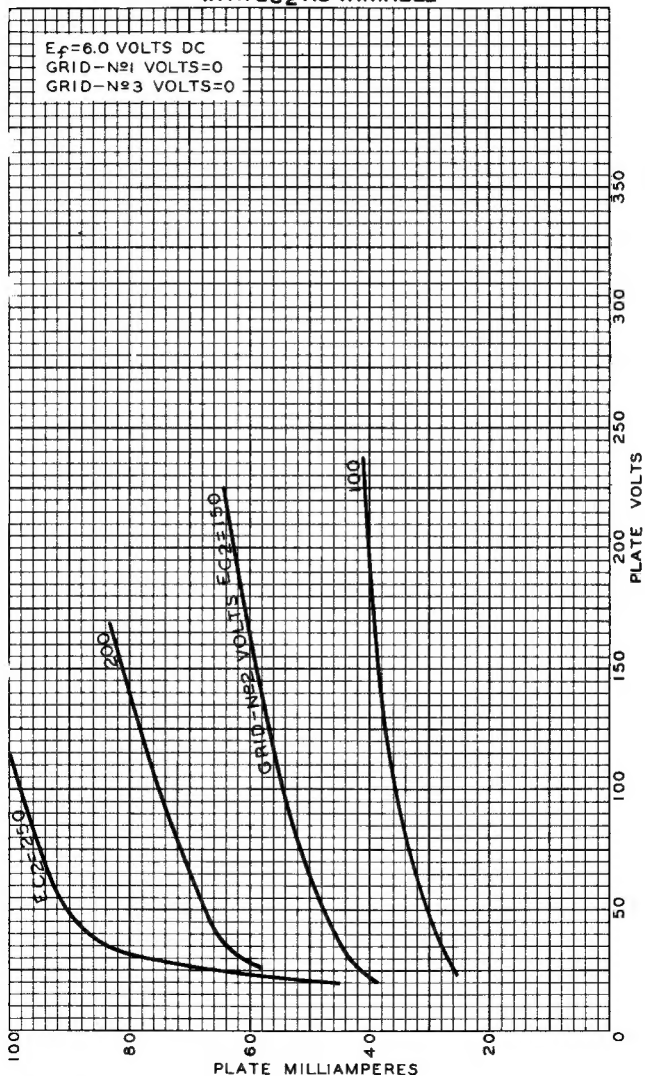
92CM-7160

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AVERAGE PLATE CHARACTERISTICS
WITH EC_2 AS VARIABLE

JAN. 10, 1949

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92CM-7159

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